The mystery of ancient Cypriot clay balls

PHILIPPA STEELE

Dr Philippa Steele is a British Academy Postdoctoral Fellow in the Faculty of Classics at the University of Cambridge. In May 2014, she delivered the Evans-Pritchard Lectures at All Souls College, Oxford, on 'Society and Writing in Ancient Cyprus'.

Ancient Cyprus has produced a distinctive epigraphic record quite unlike that of any other area of the Mediterranean. During the 2nd and 1st millennia BC, its inhabitants consistently eschewed popular and efficient writing systems that were in widespread use in nearby areas – for example cuneiform and the Greek alphabet – and clung stubbornly to homegrown scripts that no outsider would be able to read.

Writing like a Cypriot

Writing first appeared on the island around the beginning of the Late Bronze Age, probably in the 16th century BC, in the form of a still undeciphered syllabic script that has traditionally been labelled 'Cypro-Minoan'. The 'Minoan' part of the word is a reference to ancient Crete, where a related writing system, Linear A, was already in use to write the mysterious Minoan language. It is usually assumed that Cypriots encountered the Cretan script via trading routes with the Minoans and adapted it for their own purposes. When they did this, they made significant changes to the script's inventory of signs in the process, and thereby created a new script: a Cypriot script. We cannot read the surviving Cypro-Minoan inscriptions, and do not know what language or languages underlie them.

Later on, however, we know that the Greek language arrived on Cyprus, beginning a Greek-speaking tradition that survives to this day: the earliest surviving Cypriot Greek inscription dates to *c.* 1000 BC. Eventually Greek speakers made their own reform of the Cypriot writing system and created another new script that we call the 'Cypriot Syllabary'. This was different from Cypro-Minoan, but was a script of the same type and with a similarly archaic appearance. The syllabary was an unwieldy system in which every sign represented an open syllable (a vowel alone, or a consonant + vowel combination, e.g. *a* or *ta*), and so not very well suited to the Greek language (the name *Philokupros* could only be rendered as *pi-lo-ku-po-ro-se*, for example). Nevertheless, Greek speakers on Cyprus stubbornly continued to use it. This went on even while the rest of the Greek-speaking world was using the much more efficient Greek alphabet, as late as the early Hellenistic period in the 4th and 3rd centuries BC.

During the 1st millennium BC, Greek was not the only language spoken on Cyprus. Phoenician speakers, using the Phoenician abjad (similar to an alphabet but representing only consonants), lived in the island's south east. There was also at least one unidentified language, known today as 'Eteocypriot' (meaning 'Aboriginal Cypriot'), probably a survival of a much earlier Cypriot language. Although the Eteocypriot inscriptions are written in the Cypriot Syllabary – which we can read because Greek was written in the same script – we cannot identify the language. It does not appear to be related to any other known language, but because very few long texts have survived we have very little evidence to go on.

Working with undeciphered scripts and unidentified languages

Looking at ancient Cypriot inscriptions over this long period of time, one gets the impression that writing was more than a utilitarian necessity. Cypriots were deliberately marking themselves out as different from the surrounding cultures of the eastern Mediterranean through their writing customs. When I was asked to give the 2014 Evans-Pritchard lectures at All Souls, Oxford, it was this apparent pride in their different and distinctive epigraphic habits that provided the theme: what was the place of writing in ancient Cypriot society and how did it relate to Cypriot identity? It was not difficult to find plentiful examples of Cypriot writing practices that look peculiar from our modern perspective, and that would undoubtedly have looked peculiar to Cyprus' Mediterranean neighbours at the time.

One might validly wonder how far we can get with trying to understand some of the surviving ancient Cypriot inscriptions, given that quite a large number cannot be read because they are written in an undeciphered script (Cypro-Minoan), or because we do not understand the language in which they are written (Cypro-Minoan and Eteocypriot), or because they are very short or damaged (many throughout). However, not being able to read the content of an inscription is not necessarily a bar to 'understanding' it in some way, for example by assessing the function of the inscribed object or the social or cultural setting in which it was used.

Cypriot clay balls

In the Late Bronze Age, one of the most distinctively Cypriot inscription types was the clay ball. Eighty examples have been found at one site alone, the now abandoned and overgrown city of Enkomi on the island's east coast (Figure 1). Two more originate from Kition and two from Hala Sultan Tekke in the south east (Figure 2). From surviving evidence, Enkomi appears to have been a predominant (perhaps *the* predominant) producer of these items. They first make an appearance in the 14th century BC, and the last one probably belongs to the 11th, making them an inscription type of particular longevity. They account for approximately a third of surviving Late Bronze Age Cypriot inscriptions.

What were the clay balls used for? This is a question that has never been answered satisfactorily. Given that they are inscribed in an undeciphered writing system, and that they are almost completely without parallel in the ancient Mediterranean and Near East, it is difficult to find direct evidence for their usage and purpose. Nevertheless, a study of the texts and their contexts can bring us closer to an answer.

The balls are typically about 1.8-2.0 cm in diameter, and roughly spherical in shape (Figure 3). They were

Figure 1
Enkomi today. Photo: courtesy of David Lightbody.

formed in wet clay, probably by rolling them in the hand, and the inscriptions were applied before the clay had fully dried. The inscriber would have had to hold the ball between the fingers and thumb of one hand, often leaving fingerprints or impressions in the clay, and apply the written signs by using some sort of pointed stylus in the other. Sometimes the inscriptions are long enough to continue around most of the ball, creating a risk of squashing some signs with the fingers while turning the ball to finish the inscription. There have even survived some uninscribed examples, some perhaps discarded because they were too small or large or too uneven in shape. Despite the awkwardness of the manufacture and inscription process, the balls seem to have remained a popular inscription type.

The arrangement of the inscription on each ball varies. Some have a single sequence of between two and eight signs (Figure 4). A smaller number have two sequences of signs, divided by a small line referred to as a 'word divider'. The greater proportion of the balls, however, have a distinctive pattern: a sequence of a few signs followed by a word divider, and after the divider a further

Figure 2
Cyprus, showing sites where clay balls have been found.

Figure 3
A clay ball from Enkomi.
Image: courtesy of Silvia Ferrara.

Figure 4
A clay ball from Enkomi.
Image: courtesy of Silvia Ferrara.

single sign. Because Cypro-Minoan remains undeciphered, the signs are referred to by a numerical system, so we might transcribe a typical clay ball inscription as, for instance, *041-028-021 | 055*. Among the balls we sometimes find that the same sequence of signs appears in more than one ball, but with a different single sign after the word divider: for example, as well as *041-028-021 | 055* in one ball, we find *041-028-021 | 019* in another. The sign after the word divider is almost certainly some sort of abbreviation, but for what?

In recent years, some fortunate finds outside Cyprus have expanded our knowledge of the clay balls subtly but significantly. One new example, inscribed in Cypro-Minoan like the others, was found at the Greek site of Tiryns, located far to the west in the Argolid area of the Peloponnese (Figure 5). Although the clay has not been tested to detect its provenance, by appearance alone it looks as though it was manufactured locally rather than having been brought over from Cyprus. Dating to the 12th century BC (following the fall of the Mycenaean palaces *c.*1200), the ball perhaps suggests that Cypriots were living at Tiryns and continuing their own distinctive writing habits abroad.

Two other clay balls have been found at Ugarit, a cosmopolitan Late Bronze Age city in modern Syria where we know multiple languages were spoken and multiple writing systems were used. Even Cypro-Minoan inscriptions turn up there, including some clay tablets. However, the clay balls from Ugarit are inscribed in cuneiform, not in Cypro-Minoan. They are the only examples that use a different writing system, and probably record a Semitic language in use at Ugarit. Their inscriptions are short, but one of them almost certainly represents a man's name, possibly Shamunu; the other may also represent a name.

Attempting to solve the mystery

If the Ugarit clay balls record names, this makes it very likely that the Cypriot clay balls record names too. We know from the archaeological record that Cyprus and Ugarit were in contact during the Late Bronze Age, and the appearance in both places of the same inscription type strongly suggests parallel usage. Making an assumption that the balls were used to record the names of individuals therefore gives us our first clue as to how they were used.

A second clue may be sought in the balls' context. The find spots of some of the Cypriot clay balls were poorly recorded, if they were recorded at all, by archaeologists working in the early 20th century before the establishment of modern working methods. However, fortunately the find spots of some were recorded meticulously, giving an opportunity to observe

Figure 5
The Mediterranean, showing Cyprus, Tiryns and Ugarit.

where the objects might have been used. An important concentration of clay balls was found in the 'fortress building' at Enkomi. The 'fortress' was a large building whose purpose was in fact administrative rather than military, and it was in use for a large part of the Late Bronze Age, with a number of spatial reorganisations and expansions taking place over the years. The clay balls found there date to the 13th and 12th centuries BC, both before and after one reorganisation of the building in the later part of the 13th century. Even though the spatial arrangement of the building and the function of its rooms changed, it is clear that the clay balls remained an important object type utilised by the individuals operating within the building.

The excavator Porphyrios Dikaios was just one of the scholars who attempted over the years to understand the clay balls through their archaeological context. He observed that five balls originated from room 26 of the fortress building, a room marked by a series of small pits and one large one in the centre that was over 0.5 m wide and 0.8 m deep. Trying to make out a pattern in the arrangement of the pits, Dikaios assumed that they were laid out deliberately and that the function of the balls had something to do with the pits. This led to an elaborate theory about a game of 'marbles' in which the balls were thrown into the pits by players standing at the edge of the room – something akin to bagatelle on a larger scale.

Ingenious as it sounds, there is sadly little to recommend Dikaios' game of marbles. Even in room 26 the balls were not found inside the pits, which might make us question the accuracy of the 'players' in a room only a few feet wide! Furthermore, in other areas of the fortress building, clay balls were found in contexts not associated with pits, both in industrial and in residential sectors. Outside the fortress building, some of the clay balls from Enkomi, as well as those from Kition, were found associated with buildings that had religious functions, including the so-called 'House of the Ingot God' at Enkomi (leading to some suggestions that they might have been votive items used in religious rites). One of the Ugarit examples came from a tomb, but no

Cypriot example has been found in a funerary context. Overall the varied contextual associations of the clay balls suggest that they could be found or used in a variety of locations: this strongly points towards the balls being portable items, carried by individuals whether they were at work, at leisure or taking part in religious activities.

Prosopography

A study of the archaeological contexts of the clay balls is informative, but does not seem to get us much further towards understanding their function. However, the realisation that the balls might have been used or carried into multiple contexts is in itself productive. If an individual might carry the ball around in his 'pocket' all day, might this mean that it was a highly personal item? Perhaps that it had some value to the individual, despite not having intrinsic material value (being made of clay, not a precious metal or similar)? Why might such an item have carried a personal name, presumably the name of the individual who owned it? Was it marked with his name so that the individual might regain it if he lost it, or to tell it apart from clay balls owned by others?

The French scholar Émilia Masson already in the 1970s had devised a theory that might account for the distribution of the clay balls and the fact that they very probably contain names: she argued that they constituted some sort of ancient equivalent of an identity card. This would mean that they were carried by individual workers, and would be used by them, perhaps, when they 'clocked in' for the day's work; it would not be inconceivable that they might then carry them to other places by chance, resulting in the mixed distribution seen in the archaeological record. The identity card theory turns the objects into administrative tools, used by Cypriot elites to keep control of important industries – perhaps the most important of all in the Late Bronze Age Cypriot economy, namely the mining and smelting of copper, which was a major constituent of bronze.

It is difficult to prove or disprove Masson's suggestion. Whether or not the balls played a role in industrial administration, as inscriptions probably containing names they still constitute an important piece of historical evidence – even without knowing precisely what their function was, and even without being able to read the names. The discipline of prosopography, through which historians build up a picture of individuals by tracking mentions of them in written records, is relevant here. A part of Masson's identity card theory involved assuming that any Cypro-Minoan sequence that occurred in more than one clay ball referred to the same individual. For example, a man called *041-028-021* (three syllabic signs of unknown value representing a name of perhaps two or three syllables) would appear twice, in one ball with one abbreviation (*041-028-021 | 055*), and in another with a different one (*041-028-021 | 019*).

Another name found in the balls, *064-005-024* (perhaps *o-lo-le*, supplying values of the later deciphered script the Cypriot Syllabary) appears three times: twice at Enkomi and once at Hala Sultan Tekke. At Enkomi the name appears once in a typical 'sequence + abbreviation'

inscription (*064-005-024 | 046*) and once with a second sequence following (*064-005-024 | 081-008-009-072*); at Hala Sultan Tekke it appears again with a different abbreviation (*064-005-024 | 073*). For Masson these particular clay ball inscriptions were evidence of itinerant workers who might move from site to site, a man employed both at Enkomi and at Hala Sultan Tekke. However, this did not explain why the same name appeared with different abbreviations or sequences.

When the same sequence appears in more than one clay ball, it always appears with a *different* abbreviation (or occasionally another whole sequence, as above). A better way of explaining this distribution would be to assume that these were different individuals with the same name, and that the abbreviation was intended to distinguish between them. The abbreviation might stand for an occupational designation (*041-028-021* the baker and *041-028-021* the copper smelter?), or for the father's name (*o-lo-le* son of *046…* and *o-lo-le* son of *073…?*). In Eteocypriot, the later language that is thought to be a survival of one of the early Cypriot languages, we know from a tantalising bilingual inscription in Eteocypriot and Greek that there was an indigenous tradition of expressing patronymic relationships. The clay balls could then be a very early manifestation of this phenomenon.

The potential for a solution

Anyone who studies fragmentary ancient languages and writing systems will inevitably face problems such as that posed by the Late Bronze Age Cypriot clay balls. Without the aid of a time machine we may never know for certain who owned these objects and how and why they used them. Nevertheless, we can go some way to understanding something of their context and content. Recent archaeological finds such as the one at Tiryns are already furthering our knowledge of these obscure inscriptions, and further finds may follow. Advances in our understanding of the relationship between Cypriot scripts and others may also one day lead to a decipherment of Cypro-Minoan. Until then we have at least a glimpse into the use and importance of writing in ancient Cypriot society.